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Substitute for form 1449A/PTO		Complete If Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10075507
		Filing Date	February 12, 2002
		First Named Inventor	Stanley S. Toncich
		Art Unit	2811
		Examiner Name	To Be Assigned
Sheet	1 of 6	Attorney Docket Number	UTL 00160

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number Number, Kind Code ¹ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
PN	1	us- 5,729,239	03-17-1998	Rao, Jaganmohan B.L.	
PN	2	us- 6,049,726	04-11-2000	Gruenwald, Werner, et al.	
PN	3	us- 6,160,524	12-12-2000	Wilber, William	
PN	4	us- 6,198,441 B1	03-06-2001	Okabe, Hiroshi	
PN	5	us- 6,028,561	02-22-2000	Takel, Ken	
PN	6	us- 5,973,567	10-26-1999	Haal, Mark D., et al.	
PN	7	us- 4,475,108	10-02-1984	Moser, Kenneth R.	Abstract, Fig. 1
PN	8	us- 3,678,305	07-18-1972	George, Edward	
PN	9	us- 3,918,012	11-04-1975	Peuzin, Jean Claude	
PN	10	us- 5,450,092	09-12-1995	Das, Satyendranath	
PN	11	us- 6,333,719 B1	12-25-2001	Varadan, Vijay K.	
PN	12	us- 5,212,463	05-18-1993	Bebbitt, Richard W., et al.	
PN	13	us- 4,733,328	03-22-1988	Blazej, Daniel C.	
PN	14	us- 5,617,104	04-01-1997	Das, Satyendranath	
PN	15	us- 5,307,033	04-26-1994	Kosica, Thomas E., et al.	
PN	16	us- 5,427,988	06-27-1995	Sengupta, Louise, et al.	
PN	17	us- 5,557,286	09-17-1996	Varadan, Vijay K., et al.	
PN	18	us- 5,561,407	10-01-1996	Kosica, Thomas E., et al.	
PN	19	us- 5,589,845	12-31-1996	Yandrofski, Robert M.	
PN	20	us- 5,486,785	03-05-1996	Das, Satyendranath	

FOREIGN PATENT DOCUMENTS					
Examiner Initials	Cite No.	Foreign Patent Document Country Code ² , Number ³ , Kind Code ⁴ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
PN	21	WO 00/62367	10-19-2000	Carlsson, Erik, et al.	
PN	22	JP 29-05-00 2001338839	07-12-2001	Tsuneo, Mishima	
PN	23	EP 0 637 131 A1	02-01-1995	Fujita Masanori	
PN	24	EP 0 843 374 A2	05-20-1998	uller, Frithjof E., et al.	Abstract, Fig. 1
PN	25	EP 0 638 953 A1	02-15-1995	Yasuoka, et al.	
PN	26	WO 00/35042	06-15-2000	engupta, Louise, et al.	
PN	27	EP 0 680 108 A1	11-02-1995	Atokawa, Masayuki	
PN	28	EP 0 881 700 A1	12-02-1998	Atokawa, Masayuki	
PN	29	WO 00/28613	05-18-2000	engupta, Louise, et al.	
PN	30	DE 40 36 866 A1	07-25-1991	Yamamoto, Masaki	

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PN	31	us. 6,097,263	08-01-2000	Mueller, Carl H., et al.	
PN	32	us. 5,987,314	11-16-1999	Salto, Atsushi	
PN	33	us. 5,472,935	12-5-1995	Yandrofski, Robert, et al.	
PN	34	us. 4,799,066	01-17-1989	Deacon, Malcolm J.	
PN	35	us. 5,166,857	11-24-1992	Avenic, Branko, et al.	
PN	36	us. 5,880,921	03-09-1999	Them, J.L. Julian, et al.	
PN	37	us. 5,640,042	06-17-1997	Koscica, Thomas E., et al.	
PN	38	us. 4,835,499	05-30-1989	Pickett, Michael N.	Abstract, Fig. 3
PN	39	us. 3,413,543	11-26-1968	Schubring, et al.	Col. 4, lines 3- 31, Fig. 2
PN	40	us. 5,945,887	08-31-1999	Makino, Toshihiro, et al.	
PN	41	us. 5,973,568	10-26-1999	Shapiro, Gary, et al.	
PN	42	us. 5,216,392	06-01-1993	Fraser, Randall S.	
PN	43	us. 3,676,803	07-11-1972	Simmons, William J.	
PN	44	us. 3,836,874	09-17-1974	Maeda, Minoru, et al.	
PN	45	us. 5,778,308	07-07-1998	Sroka, Peter, et al.	
PN	46	us. 5,777,524	07-07-1998	Wojewoda, Carl E., et al.	
PN	47	us. 6,052,036	04-18-2000	Enstrom, Hakan, et al.	
PN	48	us. 6,292,143 B1	09-18-2001	Romanofsky, Robert R.	
PN	49	us. 5,617,104	04-01-1997	Das, Satyendranath	
	50	us.			

FOREIGN PATENT DOCUMENTS						
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		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
PN	51	EP 1-043 741 A2	10-11-2000	Klee, Mareike, et al.		
PN	52	EP 0 795 922 A1	09-17-1997	Tsuru, Teruhisa, et al.		
PN	53	EP 0 909 024 A2	04-14-1999	Nakamichi, et al.		
PN	54	WO 00/79648 A1	12-28-2000	Varadan, Vijay K., et al.		
PN	55	WO 00/79645 A1	12-28-2000	Falk, Kent, et al.		
PN	56	WO 94/13028	06-09-1994	Yandrofski, et al.	Col. 8, lines 9-26, Figs. 30-31; p. 14, par. 4, abst., figs. 2, 4, 11	
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		Application Number	10/075,507		
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		First Named Inventor	Stanley S. Toncich		
		Group Art Unit	2811		
		Examiner Name	To Be Assigned		
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PN	61	A. Presser, "Varactor-Tunable, High-Q Microwave Filter," RCA Review, Vol. 42, Dec. 1981, pp. 691-705.	
PN	62	C. Chang and T. Itoh, "Microwave Active Filters Based on Coupled Negative Resistance Method," IEEE Trans. on Microwave Theory and Techniques, Vol. 38, No. 12, Dec. 1990, pp. 1879-1884.	
PN	63	P. Katzin, B. Bedard, and Y. Ayasli, "Narrow-Band MMIC Filters with Automatic Tuning and Q-Factor Control," 1993 IEEE MTT-S Int. Microwave Symp. Digest pp.403-406.	
PN	64	B. Hopf, I. Wolff, and M. Guglielmi, "Coplanar MMIC Active Bandpass Filters Using Negative Resistance Circuits," 1994 IEEE MTT-S Symposium Digest, pp. 1183-1185.	
PN	65	U. Karacaglu and I.D. Robertson, "High Selectivity Varactor-Tuned MMIC Bandpass Filter Using Lossless Active Resonators," 1994 IEEE MTT-Symposium Digest, pp. 1191-1194.	
PN	66	B. Nauta, "A CMOS Transconductance-C Filter Technique for Very High Frequencies," IEEE Journal of Solid-State Circuits, Vol. 27, No. 2, February 1992, pp. 142-153.	
PN	67	K Fujita, H. Itoh, R. Yamamoto, "A 15.6 GHz Commercially Based 1/8 GaAs Dynamic Presealer," 1989 IEEE GaAs IC Symposium, pp. 113-116.	
PN	66	J. Smuk, P. Katzin, "MMIC Phase Locked L-S Band Oscillators," 1994 IEEE GaAs Symposium Digest, pp. 27-29.	
PN	69	S. R. Chendler, I. C. Hunter, and J.G. Gardiner, "Active Varactor Tunable Bandpass Filter," IEEE Microwave and Guided Wave Letters, Vol. 3, No. 3, March 1993, pp. 70-71.	
PN	70	I. C. Hunter and John D. Rhodes, "Electronically Tunable Microwave Bandpass Filters," IEEE Trans. on MTT, Vol. 30, No. 9, September 1982, pp. 1354-1367.	
PN	71	S. Toyoda, "Quarter-wavelength Coupled Variable Bandstop and Bandpass Filters Using Varactor Diodes," IEEE Trans. on Mtt, Vol. 30, No. 9, September 1982, pp. 1367-1369.	

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PN	72	B. Yu. Kapilevich, "Variety of Approaches to Designing Microwave Active Filters," Proc. 27th European Microwave Conf., Jerusalem, Vol. 1, 1997, pp. 397-408.	
PN	73	B. Yu. Kapilevich, "Understand the Operation of Channelized Active Filters," Microwaves & RF, January 1997, pp. 89-92.	
PN	74	M. Dishal, "Alignment and Adjustment of Synchronously Tuned Multiple Resonator-Circuit Filters" Proc. IRE 39, November 1951, pp. 1448-1455.	
PN	75	S. B. Cohn, "Dissipation Loss in Multiple-Coupled-Resonator Filters," Proc. IRE 47, August 1959, pp. 1342-1348.	
PN	76	G. L. Matthaei, "An Electronically Tunable Up-Converter," Proc. IRE 49, November 1961, pp. 1703-1704.	
PN	77	E. G. Fubini and E.A. Guillemin, "Minimum Insertion Loss Filters," Proc. IRE 47, January 1959, pp. 37-41.	
PN	78	W.J. Getsinger, "Prototypes for Use in Broadbanding Reflection Amplifiers," IEEE Trans. PTGMITT-11, November 1963, pp. 486-497.	
PN	79	E.S. Kuh and M. Fukada, "Optimum Synthesis of Wide-Band Parametric Amplifiers and Converters," IRE Trans. PCCT-8, December 1961, pp.410-415.	
PN	80	W. J. Getsinger and G.L. Matthaei, "Some Aspects of the Design of Wide-Band Up-Converters and Nondegenerate Parametric Amplifiers," IEEE Trans. PTGMITT-12, January 1964, pp. 77-87.	
PN	81	R. L. Steven, "Design of a Tunable Multi-Cavity Waveguide Band-Pass Filter," 1959 IRE National Convention Record, Part 3, pp. 91-112.	
PN	82	J.J. Taub and B. F. Bogner, "Design of Three-Resonator Dissipative Band-Pass Filters Having Minimum Insertion Loss," Proc. IRE 45, pp. 681-687 (May 1957).	

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PN	83	K.L. Kotzebue, "Broadband Electronically-Tunable Microwave Filters," 1960 IRE Wescon Convention Record, Part 1, pp.21-27.	
PN	84	J.P. Louhos and I. Panknaho, "Electrical Tuning of Integrated Mobile Phone Antennas," Nokia Mobile Phones, pp. 69- 87 (September 15, 1999).	
PN	85	P. K. Panayi, M. Al-Nuaimi, and L. P. Trissimtzis, "Tuning Techniques for the Planar Inverted-F Antenna," National Conference on Antennas and Propagation Publication, No. 461, pp. 259-262 (April 1999).	
PN	86	Satoshi Makdoka, et al., "A High Efficiency GaAs MCM Power Amplifier for 1.9 GHz Digital Cordless Telephones," IEEE 1994 Microwave and Millimeter-Wave Monolithic Circuits Symposium, pp. 51-54 (1994).	
PN	87	V. K. Varadan, K. A. Jose, V. V. Varadan, "Design and Development of Electronically Tunable Microstrip Antennas," IOP Publishing Ltd., pp.238-242 (1999).	
PN	88	Communication Relating to the Results of the Partial International Search: PCT/IB 02/01077 (2002).	
PN	89	International Search Report: PCT/IB 02/01086 (June 24, 2002).	
PN	90	International Search Report: PCT/IB 02/01078 (July 10, 2002).	
PN	91	International Search Report: PCT/IB 02/01087 (July 19, 2002).	
PN	92	International Search Report: PCT/IB 02/01107 (July 11, 2002).	
PN	93	International Search Report: PCT/IB 02/01120 (July 11, 2002).	

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PN	94	International Search Report: PCT/IB 02/01098 (July 4, 2002).	
PN	95	International Search Report: PCT/IB 02/01082 (July 8, 2002).	
PN	96	International Search Report: PCT/IB 02/01144 (July 12, 2002).	
PN	97	International Search Report: PCT/IB 02/01026 (June 28, 2002).	
PN	98	International Search Report: PCT/IB 02/01027 (June 25, 2002).	
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